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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
OLADAPO, TAIWO				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,977

Applicant(s)

BENARD ET AL.

Examiner

TAIWO T. OLADAPO

Art Unit

4151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 6/9/2005;3/9/2006;3/23/2007
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1 – 14, 16 – 21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ballegoy et al. (WO00/29511) in view of Nalesnik et al. (6,103,674).

5. In regards to claim 1, Van Ballegoy teaches a process to prepare a lubricant by contacting a feed containing more than 50 wt% wax (page 3 lines 4 – 5) in the presence of hydrogen catalyst comprising Group VIII metal supported on a refractory oxide carrier (page 4 lines 8 – 29) contacting effluent of step with a binder and MTW zeolite (page 4 lines 29 – 35; page 7 lines 25 – 26), viscosity index of 120 (page 4 lines 1 – 3). Van Ballegoy does not teach adding a pour point depressant to the base oil. Nalesnik teaches additives for lubricant composition including pour point depressants (title) (column 12 lines 50 – 63). The pour point is the lowest temperature at which lubricating oils can flow, and adding pour point depressants in lubricating oils is used to effectively lower a lubricant's pour point. It would have been obvious to one of skill in the art at the time of the invention to have combined the teachings of Nalesnik to the composition of Van Ballegoy in order to ensure stability of the base oil at lower temperatures.
6. In regards to claim 2, Van Ballegoy teaches that the group VIII metal is platinum (page 6 lines 23 – 29).
7. In regards to claim 3, 4, Van Ballegoy teaches the most preferred binder is silica (page 6 lines 12 – 13).
8. In regards to claim 5, 6, Van Ballegoy teaches the zeolites are subjected to surface dealumination comprising contacting the zeolites with fluorosilicate salt of the stated formula (page 11 lines 1 – 17).
9. In regards to claim 7, Van Ballegoy teaches Fischer tropesch waxes (page 3 lines 27 – 29) and a series flow process of step (a) and (b) as specified (page 4 lines 8 – 35; page 3 lines 23 – 26).

10. In regards to claim 8, Van Ballegoy teaches that feed can comprise up to a maximum of 3% (or 30,000 ppm) sulfur by weight before hydrodesulphurization is necessary (page 3 lines 19 – 26) and effluent is used in a series flow step as shown for claim 7 above.

11. In regards to claim 9, the conversion of wax from the hydrogenation process is a result effective variable that can be optimized through routine experimentation and controlled by parameters such as: amount of catalyst present during reaction; temperature at which reaction is taking place; total time the reaction is allowed to occur. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the conversion of the base oil product according to Van Ballegoy's teaching to meet any desired percentage.

12. In regards to claim 10, Van Ballegoy teaches the sulfur content of feed as specified for claim 8 above. Van Ballegoy teaches the effluent of hydrogenation step (i.e. ammonia and hydrogen sulfide) i.e. separation prior to catalytic wax conversion is inherent (page 18 lines 13 – 15, Example 1). In Example 1, Van Ballegoy teaches that a previously hydrocracked waxy raffinate feed undergoes catalytic conversion. A **raffinate** feed is a liquid stream, no gases.

13. In regards to claim 11, Van Ballegoy teaches the pressure use in the catalytic conversion of wax is from 15 to 100 bar (page 5 lines 9 – 14). Van Ballegoy does not teach the pressure at which hydrodesulphurization occurs. The pressure used in the hydrogenation process is a result effective variable that can be optimized through routine experimentation and controlled as needed to for the reaction to occur effectively. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the pressure as needed to facilitate the hydrogenation reaction.

14. In regards to claim 12, Van Ballegoy teaches pre-sulphided hydrodesulphurization catalyst comprising nickel and tungsten on an acid amorphous silica-alumina carrier (page 4 lines 8 – 29).

15. In regards to claim 16, Van Ballegoy teaches the weight percent of hydrodesulphurization catalyst on the carrier alone (page 4 lines 14 – 23).

16. In regards to claim 19, Van Ballegoy teaches the weight percent of nickel and tungsten in the catalyst (page 4 lines 17 – 23).

17. In regards to claims 13, 14, 17, 18, 20, 21, the parameters such as hydrodesulphurization activity, n-heptane cracking test value, surface area, and pore volume of catalyst used in the process are result effective variables that can be optimized through routine experimentation to meet the desired characteristics needed. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the various parameters through selection of specific catalysts to meet the desired characteristics. It is further noted that measuring the values by specific tests do not impact patentability of the otherwise obvious process.

18. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ballegoy et al. (WO00/29511) in view of Nalesnik et al. (6,103,674), and in further view of Nakagawa (US 5,425,933)

19. In regards to claim 15, Van Ballegoy and Nalesnik combined teach the process of hydrogenation by impregnating nickel and tungsten on the silica-alumina carrier (page 2 lines 22 – 23; page 4 lines 14 – 22; page 18 lines 3 – 12). Van Ballegoy and Nalesnik combined do not teach the steps of chelating the catalysts with a chelating agent. Nakagawa teaches using chelating agents when treating zeolites with a metal, stating that “zeolites can be leached with a

chelating agent” (column 9 lines 21 - 26). The chelating agent binds the zeolite to form a ligand or complex to aid metal addition. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Nakagawa to the method of Van Ballegoy and Nalesnik combined in order to aid adequate binding of platinum to the zeolite crystals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO T. OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on Monday - Friday (11:30-5:00) EST, ALT Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mikhail Kornakov can be reached on 571-272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 4151